

✓ ✓  
Page 40f, line 8, delete "patient; Fig. 3b" is" and  
insert therefor --patient and--.

In the Claims:

Rule  
126

Cancel claims 13 through 33 and substitute the  
following claims therefor:

*AM* Claim 24. A process for detecting the presence of cancerous or malignant tumor cells in a cell collection, comprising applying to said cell collection anti-cancer RECOGNIN or a purified fraction thereof, whereby said anti-cancer RECOGNIN or purified fraction thereof preferentially attaches to cancerous cells and can thereby be detected by attached visible or signal-emitting means, said cancer RECOGNIN comprising a product, derived from cancerous tumor tissue or cells, characterized by forming a single line precipitate with its specific antibody in quantitative precipitin tests and Ouchterlony gel diffusion tests, being soluble in water and aqueous solutions having an acid or neutral pH, and insoluble at alkaline pH, having a spectrophotometric absorption peak wave length of 280 mu and a molecular weight of from about 3,000 to about 25,000, and further characterized by having an amino acid residue composition characterized by high proportions of glutamic and aspartic acids and high ratios of glutamic and aspartic acids to histidine.



1 (56)

B  
cont.

Claim 2. The process according to claim 1  
wherein said cancerous tumor cells whose presence is sought to be  
detected are glial tumor cells.

Claim 3. The process according to claim 1 wherein  
said cell collection is in vivo.

Claim 4. The process according to claim 1 wherein  
said cell collection is in vitro.



*B  
cont.*

**Claim 18.** A process for detecting the presence of cancerous or malignant tumor cells in a cell collection, comprising applying to said cell collection anti-MALIGNIN or a purified fraction thereof, whereby said anti-MALIGNIN or purified fraction thereof preferentially attaches to cancerous cells and can thereby be detected by attached visible or signal-emitting means, said MALIGNIN comprising a product, derived from brain tumor cells, which forms a single line precipitate with its specific antibody in quantitative precipitin tests and Ouchterlony gel diffusion tests, being soluble in water and aqueous solution having an acid or neutral pH, and insoluble at an alkaline pH, and has a spectrophotometric absorption peak wave length of 280 mu, a molecular weight of about 10,000, and an amino acid composition approximately as follows:

	<u>APPROXIMATE NO. OF RESIDUES</u>
Aspartic Acid	9
Threonine	5
Serine	5
Glutamic Acid	13
Proline	4
Glycine	6
Alanine	7
Valine	6
1/2 Cysteine	1
Methionine	2
Isoleucine	4
Leucine	8
Tryosine	3
Phenylalanine	3
Lysine	6
Histidine	2
Arginine	5
	89

B)  
cont.

the amino acids cysteic, hydroxyproline, norleucine, ammonia,  
isodesmosine, lysinonorleucine and gamma-aminobutyric acid  
being absent in detectable amounts.

(59)

*P  
cont.*

*26*

Claim 39. A process for detecting the presence of cancerous or malignant tumor cells in a cell collection, comprising applying to said cell collection anti-MALIGNIN or a purified fraction thereof, and thereafter applying fluorescein-conjugated anti-(anti-MALIGNIN) thereto, whereby fluorescence occurs only in cancerous cells upon illumination, said MALIGNIN comprising a product, derived from brain tumor cells, which forms a single line precipitate with its specific antibody in quantitative precipitin tests and Ouchterlony gel diffusion tests, being soluble in water and aqueous solution having an acid or neutral pH, and insoluble at an alkaline pH, and has a spectrophotometric absorption peak wave length of 280 mu, a molecular weight of about 10,000, and an amino acid composition approximately as follows:

*10600X*

APPROXIMATE NO.  
OF RESIDUES

Aspartic Acid	9
Threonine	5
Serine	5
Glutamic Acid	13
Proline	4
Glycine	6
Alanine	7
Valine	6
1/2 Cysteine	1
Methionine	2
Isoleucine	4
Leucine	8
Tyrosine	3
Phenylalanine	3
Lysine	6
Histidine	2
Arginine	5

*Sub C1*

the amino acids cysteic, hydroxyproline, norleucine, ammonia, isodesmosine, lysinonorleucine and gamma-aminobutyric acid being absent in detectable amounts.

*B*

*cont*

*Claim 40.* The process according to claim 38 wherein said anti-MALIGNIN is produced by the reaction of (a) a fluid or other mixture containing anti-MALIGNIN and (b) MALIGNIN.

*Claim 41.* The process according to claim 40 wherein said MALIGNIN of (b) is in the form of a complex with an inert carrier.

*Claim 42.* The process according to claim 41 wherein said inert carrier is bromoacetylcellulose.

*Claim 43.* The process according to claim 35 wherein said anti-MALIGNIN or purified fraction thereof is at least partially freed of substances which are less or non-reactive in fluorescent detection when applied to known cancerous cells.

*Claim 44.* The process according to claim 36 wherein said anti-MALIGNIN or purified fraction thereof is attached to a signal emitter, whereby those cancer cells to which said anti-MALIGNIN or purified fraction thereof has been preferentially attached can be detected.

*B1*  
cont.

**claim 8.** The product comprising anti-MALIGNIN, or a purified fraction thereof, attached to a signal emitter, said MALIGNIN comprising a product, derived from brain tumor cells, which form a single line precipitate with its specific antibody in quantitative precipitin tests and Ouchterlony gel diffusion tests, being soluble in water and aqueous solution having an acid or neutral pH, and insoluble at an alkaline pH, and has a spectrophotometric absorption peak wave length of 280 mu, a molecular weight of about 10,000, and an amino acid composition approximately as follows:

	<u>APPROXIMATE NO. OF RESIDUES</u>
Aspartic Acid	9
Threonine	5
Serine	5
Glutamic Acid	13
Proline	4
Glycine	6
Alanine	7
Valine	6
1/2 Cysteine	1
Methionine	2
Isoleucine	4
Leucine	8
Tryosine	3
Phenylalanine	3
Lysine	6
Histidine	2
Arginine	<u>5</u> <u>89</u>

64

B  
P.D.  
cont.  
D

the amino acids cysteic, hydroxyproline, norleucine, ammonia, isodesmosine, lysinonorleucine and gamma-aminobutyric acid being absent in detectable amounts.

Claim 13. The <sup>product</sup> <sub>process</sub> according to claim 12  
wherein said anti-MALIGNIN, or purified fraction thereof, is directly attached to said signal emitter.

Claim 14. The <sup>product</sup> <sub>process</sub> according to claim 12  
wherein said anti-MALIGNIN, or purified fraction thereof, is indirectly attached to said signal emitter.

62

*B*  
cont.

*10660A*

Claim 18. A process for purifying intact anti-MALIGNIN comprising fractionating said intact anti-MALIGNIN by chromatographic separation to produce sub-fractions distinguishable from each other in terms of their content of intact anti-MALIGNIN protein and smaller molecular weight fractions identifiable as Fab or F<sub>c</sub> components, said MALIGNIN comprising a product, derived from brain tumor cells, which forms a single line precipitate with its specific antibody in quantitative precipitin tests and Ouchterlony gel diffusion tests, being soluble in water and aqueous solution having an acid or neutral pH, and insoluble at an alkaline pH, and has a spectrophotometric absorption peak wave length of 280 mu, a molecular weight of about 10,000, and an amino acid composition approximately as follows:

	<u>APPROXIMATE NO. OF RESIDUES</u>
Aspartic Acid	9
Threonine	5
Serine	5
Glutamic Acid	13
Proline	4
Glycine	6
Alanine	7
Valine	6
1/2 Cysteine	1
Methionine	2
Isoleucine	4
Leucine	8
Tryosine	3
Phenylalanine	3
Lysine	6
Histidine	2
Arginine	<u>5</u> <u>89</u>